APPENDIX 2

DATA SHEETS

LOCATION:_____ Tech lab initials:_____DATE:_____
Number of acres in property:_____ Field tech initial:_____DATE:_____

Roads and trails within hexagon:

Category	Width of road	Length of road	Area of road (lxw)

Categories: 4 lane highway, 2 lane highway, paved road, unpaved road, OHV (off-highway vehicle, i.e. all terrain vehicles) trail, and hiking trail.

Habitat types within hexagon:

Habitat	Percent of hexagon area in habitat
1^{o} habitat:_____	

Roads and trails within 101 ha block:

Category	Width of road	Length of road	Area of road (lxw)

Categories: 4 lane highway, 2 lane highway, paved road, unpaved road, OHV (off-highway vehicle, i.e. all terrain vehicles) trail, and hiking trail.

Habitat types within 101 ha block (approximate 101 ha):

Habitat	Percent of hexagon area in habitat
1^{o} habitat:_____	

Other notes (i.e. – block smaller than 101 ha due to property boundary, etc, etc)

Ground truthing of data obtained from GIS for LOTIC (running water) HABITATS:
This should be filled out in the lab, prior to habitat characterization field work. Field work should include recording information concerning discrepancies between the database and what is actually there. For field work, the technician should have a map of the site.
LOCATION:_____
UTM coordinates from lab: E_____ N_____
GIS OBS:_____ DATABASE USED:_____
Date of lab work:_____Date of field work:_____Field OBS:_____
Estimated spacing needed for 11 transects (at 3X width of stream):_____

Roads and trails within 30 m of each side of channel:

Category	Distance from shore	Area of road (l*w)	Width where crosses channel

Categories: 4 lane highway, 2 lane highway, paved road, unpaved road, OHV (off-highway vehicle, i.e. all terrain vehicles) trail, and hiking trail.

Additional compacted soil areas within 10 m of channel:

Description	Distance from shore	Area of compaction

Roads and trails within 30 to 100 m of each side of channel:

Category	Distance from shore	Area of road (l*w)	Width where crosses channel

Categories: 4 lane highway, 2 lane highway, paved road, unpaved road, OHV (off-highway vehicle, i.e. all terrain vehicles) trail, and hiking trail.

Remember to print a map with the wetlands numbered within each hexagon for ease of field identification, and to include these numbers, if possible to tell from previous GIS coverage, on the POOLS data table.
Additional information, things that may need checking in the field or things that may be needed in the field:

- Is this intermittent/ephemeral or does it have water?_____
- Does this need to be electroshocked and/or checked for mussels?_____

Ground truthing of data obtained from GIS for LENTIC (standing water) HABITATS:
This should be filled out in the lab, prior to habitat characterization field work. Field work should include recording information concerning discrepancies between the database and what is actually there. For field work, the technician should have a map of the site.
LOCATION:_____ POOL ID:_____
GIS OBS:_____ DATABASE USED:_____
Date of lab work:_____Date of field work:_____Field OBS:_____
UTM coordinates (from lab): E_____ N_____
Estimated perimeter/circumference: _____
Estimated spacing needed for 30 plots around perimeter:_____

Roads and trails within 30 m of shoreline:

Category	Distance from shore	Area of road (l*w)

Categories: 4 lane highway, 2 lane highway, paved road, unpaved road, OHV (off-highway vehicle, i.e. all terrain vehicles) trail, and hiking trail.

Additional compacted soil areas within 10 m of shoreline:

Description	Distance from shore	Area of compaction

Roads and trails between 30-100 m of shoreline:

Category	Distance from shore	Area of road (l*w)

Categories: 4 lane highway, 2 lane highway, paved road, unpaved road, OHV (off-highway vehicle, i.e. all terrain vehicles) trail, and hiking trail.

Additional information, things that may need checking in the field or things that may be needed in the field:

Sherman trap small mammal live trapping. DATE:_____ OBS._____ LOCATION:_____ pg ___of____

DAY (1-5):___VISIT (am/pm):____Start time:_____End Time:_____ Start temp (C):____ End temp (C):____%clouds:____Rain:___

Fate: N=new; R=recapture; D=dead Age: A=adult; SA=sub-adult; J=juvenile Sex: M=male; F=female; U=unknown
Br. (breeding status): 1=non-breeding; 2=pregnant; 3=lactating; 4=testes enlarged; 5=unknown Recap: if so, what's the mark?
Please remember to list any incidental animal sightings on the back or in the margins of this data sheet.

Trap number			Species code				Fate	Age	Sex	Br.	Recap	Mark	Tot. wgt	Bag wgt	Tot lgth	Tail lgth	Foot lgth	Ear lgth	Comments

Date data entered:_____Corresponding record #:_____Date checked:_____Checked by:_____

Track plate data sheet. This could be filled out in the office or lab IF the trackplate is stored correctly. If there is some doubt as to the transport of the trackplate, then this sheet should be filled out in the field prior to plate transport. Remember to cover the contact paper surface with clear tape to prevent track smudging.

DATE:_____ OBS._____ LOCATION:_____ pg ___of____ DAY (1-10):_____ Rain since last visit:____

Track plate number	Species code						Front foot length (mm)			Hind foot length (mm)			Comments

Please remember to list any incidental animal sightings on the back or in the margins of this data sheet.

Please record which exposures have been taken on each camera station with each visit:
Date:_____
TM1:_____ TM2:_____ TM3:_____

Date data entered:_____Corresponding record #:_____Date checked:_____Checked by:_____

Bat mist net trapping. DATE:_____ OBS._____ LOCATION:_____ pg ___of____

Start time:_____End Time:_____ Start temp (C):____ End temp (C):____%clouds:____Rain:_____Wind speed:_____

NOTES ON NET SIZE & CONFIGURATION:_____
_____

Sex: F- Female, M- Male, U- unknown; Re. st. = Reproductive status: P=Pregnant (female), L=lactating (female), PR=post-repro, NR=Non-repro, U=unknown, DT=Descended testicles (male), ND=not descended (male); Age: A=adult, J=juvenile; The calcar is checked to determine keel presence.

Time				Net #	Species				Sex	Re. st.	Age	Forearm (mm)			Ear (mm)		Thumb (mm)		Foot (mm)		Keel Y/N	Trg.	Comments, other measurements

Date data entered:_____Corresponding record #:_____Date checked:_____Checked by:_____

If habitat data has been collected as part of another sampling protocol, the following information should still be collected during mist netting:

MAP: Diagram trapping location within the 26 acre plot, include water source/net site placement, net configuration and numbers, net length and height, and a North arrow. Also indicate potential roosting locations such as caves, hollow snags, bridges, etc....

Habitat:
Water type:_____Diameter or distance across:_____
Other trapping habitat (road, trail, etc):_____
Percent of emergent vegetative cover in water body being trapped:_____
Turbidity (clear, semi-clear, murky):_____Water depth:_____
Distance to forest edge:_____
Comments:_____
_____
_____
_____

Notes on other species encountered:

Data entered by:_____Checked by:_____

Amphibian and Reptile VES. DATE:_____ OBS:_____ LOCATION:_____ pg___of___

Start temp (C):_____ End temp (C):_____ %clouds:_____ Rain:_____ Wind speed:_____ Start time:_____ End time:_____

Area corresponds to the GIS map of the Location being surveyed. Each map should have wetlands numbered. If the area being searched or where an animal is encountered is not marked on the map, record NM in this column. Wind speed codes: 0=no movement; 1= calm, smoke drifts; 2=light, feel on face, leaves rustle; 3=gentle, leaves in constant motion, flags extend; 4=moderate, dust and paper rises; 5=fast, small trees sway, crested wavelets on water. Det. Type=Detection type: v=visual; c=capture; a=auditory; s=sign. Sub.=Subsrate type: R=rock; L=log; W=water; V=vegetation; X=litter. Age: A=adult; M=metamorph; L=tadpole; E=egg mass. Sex: M/F/U. Status: G=gravid; S=swollen testes; otherwise leave this column blank.

Area	Time				Species				Det. type	Sub.	Mark	Total length				SVL				Age	Sex	Status	Other

Date data entered:_____Corresponding record #:_____Date checked:_____Checked by:_____

Nocturnal frog call data sheet. DATE:_____ OBS:_____ pg___of___
LOCATION:_____Start air temp (C):_____ End air temp (C):_____
%clouds:_____ Rain:_____ Wind:_____ Start time:_____ End time:_____

Area corresponds to the GIS map of the Location being surveyed. Each map should have wetlands numbered. If the area being searched or where an animal is encountered is not marked on the map, record NM in this column. Wind speed codes: 0=no movement; 1= calm, smoke drifts; 2=light, feel on face, leaves rustle; 3=gentle, leaves in constant motion, flags extend; 4=moderate, dust and paper rises; 5=fast, small trees sway, crested wavelets on water. Calling index: 1=Individuals can be counted; 2=overlap in calls; 3=full chorus, continuous and overlapping.

Area	Dry/wet	Water temp	Species	Calling index

Notes on other wildlife encountered tonight:

Date data entered:___Corresponding record #:_____Date checked:____Checked by:____

IOWA FROG AND TOAD SURVEY

Iowa Department of Natural Resources | Wildlife Diversity Program | 1436 255th Street | Boone, IA 50036 | ph: 515-432-2823 | fax: 515-432-2835 | stephanie.shepherd@dnr.state.ia.us

OBSERVER'S NAME(S)

RUN 1 _____ ROUTE NO. _____

RUN 2 _____ YEAR _____

RUN 3 _____ COUNTY _____

RUN 1: April 1-28 / Water 50°

DATE: _____

Begin Survey		End Survey	
Time:		Time:	
Wind:		Wind:	
Air Temp:		Air Temp:	
Sky:		Sky:	

SITE NAME	Dry/Wet	Water Temp	Wood Frog	Chorus Frog	Spring Peeper	Crawfish Frog	Leopard Frog *	Pickerel Frog	American Toad	Gr. Plains Toad	E. Tree Frog	Cope's Tree Frog	Cricket Frog	Woodhouse's Toad **	Plains Spadefoot	Green Frog	Bullfrog
1-																	
2-																	
3-																	
4-																	
5-																	
6-																	
7-																	
8-																	

RUN 2: May 7-June 4 / Water 60°

DATE: _____

Begin Survey		End Survey	
Time:		Time:	
Wind:		Wind:	
Air Temp:		Air Temp:	
Sky:		Sky:	

SITE NAME	Dry/Wet	Water Temp	Wood Frog	Chorus Frog	Spring Peeper	Crawfish Frog	Leopard Frog *	Pickerel Frog	American Toad	Gr. Plains Toad	E. Tree Frog	Cope's Tree Frog	Cricket Frog	Woodhouse's Toad **	Plains Spadefoot	Green Frog	Bullfrog
1-																	
2-																	
3-																	
4-																	
5-																	
6-																	
7-																	
8-																	

RUN 3: June 13- July 10 / Water 70°

DATE: _____

Begin Survey		End Survey	
Time:		Time:	
Wind:		Wind:	
Air Temp:		Air Temp:	
Sky:		Sky:	

SITE NAME	Dry/Wet	Water Temp	Wood Frog	Chorus Frog	Spring Peeper	Crawfish Frog	Leopard Frog *	Pickerel Frog	American Toad	Gr. Plains Toad	E. Tree Frog	Cope's Tree Frog	Cricket Frog	Woodhouse's Toad **	Plains Spadefoot	Green Frog	Bullfrog
1-																	
2-																	
3-																	
4-																	
5-																	
6-																	
7-																	
8-																	

Sky Codes	
0-	Clear or few clouds
1-	Partly cloudy or variable
2-	cloudy or overcast
3-	Fog
4-	Drizzle
5-	Rain shower

Wind Codes	
0-	0 mph, no movement
1-	1-3 mph, Calm. Smoke drifts
2-	4-7 mph, Light. Fell on face, leaves rustle, wind vanes move.
3-	8-12mph, Gentle. Leaves/twigs in constant motion, flag extends.
4-	13-18mph, Moderate. Dust and paper raised. Branches in motion.
5-	19-24mph, Fresh. Small trees sway, crested wavelets on water.

Relative Call Index Codes	
0-	No individuals heard.
1-	Individuals can be counted. There may be space between calls.
2-	Calls of individuals can be distinguished, but there is some overlapping.
3-	Full chorus of calls. Constant, continuous, and overlapping.

Comments:

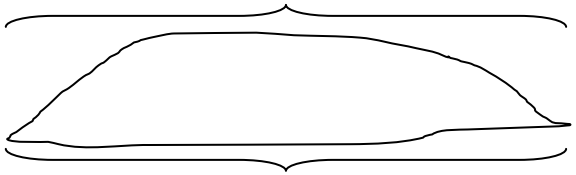
* Leopard Frog includes Northern, Plains, and Southern. Please verify and note any confirmed sightings.

** Woodhouse's includes Fowler's toad.

Lab sheet for turtle marking:

Species:_____ Site/area/county:_____Page_____

Side view of turtle shell



Plastron length (cm)

Date	Exact location	Capture method	MARK ID	Plastron length (cm)	Weight (g)	Comments

Turtle, minnow, and all species trap data sheet. DATE:_____ OBS:_____ LOCATION:_____ pg___
Start temp (C):_____ End temp (C):_____ %clouds:_____ Rain:_____ Wind speed:_____ Start time:_____ End time:_____

Area	Trap type		Trap #		Species				Common name	Number caught		Mark?	Measure?	Comments

Date data entered:_____Corresponding record #:_____Date checked:_____Checked by:_____

Bird (& other vocal animal) point count data: DATE:_____ OBS:_____ LOCATION:_____ pg___of___

VISIT #:___ Start time:____ End time:____ Start Temp (F/C):___ End Temp (F/C):___ %clouds:_____ Rain:_____ Windspd:____

Noise:_____ Other disturbance:_____ Comments:_____

Remember to record species other than birds which you observe. Stat.=point count station number. Time=military time. 0-25 (etc.)=distance codes in meters, FO=flyover. If the detected individual is a singing male, indicate this under 'comment'.

								0-3 minutes						3-5 minutes						5-10 minutes						Comment
Stat.	Time				Species code			0-25	25-50	50-75	75-100	>100	FO	0-25	25-50	50-75	75-100	>100	FO	0-25	25-50	50-75	75-100	>100	FO	

Date data entered:_____Corresponding record #:_____Date checked:_____Checked by:_____

Back side of Bird point count data sheet.
List additional wildlife seen today.

Species	Location	Type of detection	Number of animals	Comments
E.g.: Red winged blackbird	Between PS 5 & 6	Visual	5	

In addition to % cloud cover on other side of data sheet, indicate sky condition:_____
0=clear sky, few clouds (<25%); 1=Partly cloudy (25-70% clouds); 2=Cloudy (70-100%);
3=Rain; 4=Fog or smoke; and 6=Snow
Beaufort Wind Scale:

Beaufort Number	Wind speed (mph)	Indicators
0	<1	Smoke rises vertically
1	1-3	Wind direction shown by smoke drift
2	4-7	Wind felt on face, leaves rustle
3	8-12	Leaves in constant motion, light flag extended
4	13-18	Raises dust & loose paper, small branches move
5	19-24	Small, leafy trees sway

Date data entered:___Corresponding record #:_____Date checked:____Checked by:___

Nocturnal bird broadcast calling survey: DATE:_____ OBS:_____ LOCATION:_____ pg___of___

VISIT #:____ Start time:____ End time:____ Start Temp (C):____ End Temp (C):____ %clouds:_____ Rain:_____ Windspd:_____

Noise:_____ Other disturbance:_____ Comments:_____

Call station (from map)		Species code				Tally	Sum	Sex	Time of detection				Place on calling tape	Comments

Date data entered:_____Corresponding record #:_____Date checked:_____Checked by:_____

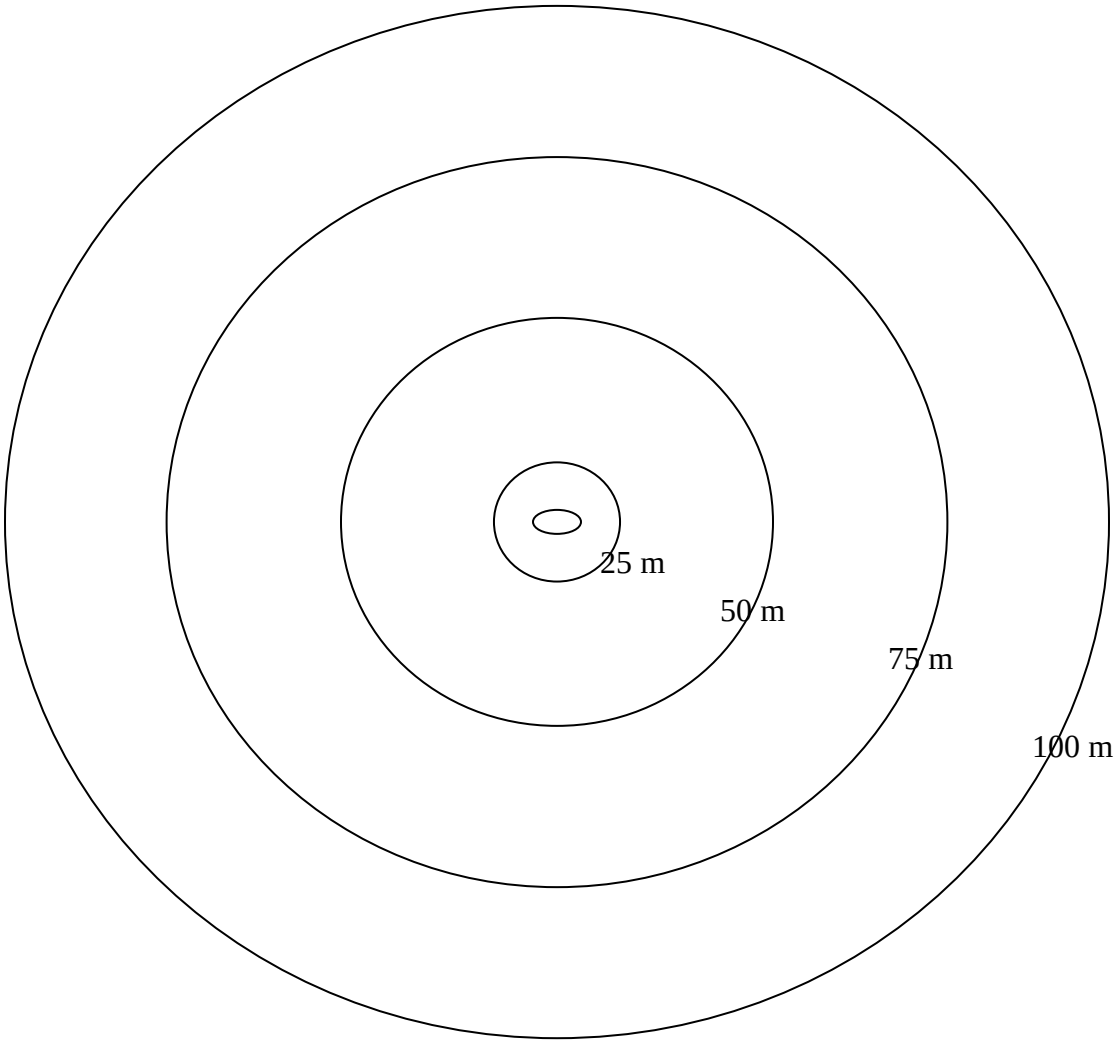
Calls included on broadcast tape for Polk County:

Common name	Species code	Place on calling tape
Burrowing owl	BUOW	1
Eastern screech owl	ESCO	2
Long-eared owl	LOOW	3
Short-eared owl	SHOW	4
Barn owl	BAOW	5
Barred owl	BARRO	6
Great horned owl	GHOW	7

List additional wildlife seen tonight.

Species	Location	Type of detection	Number of animals	Comments

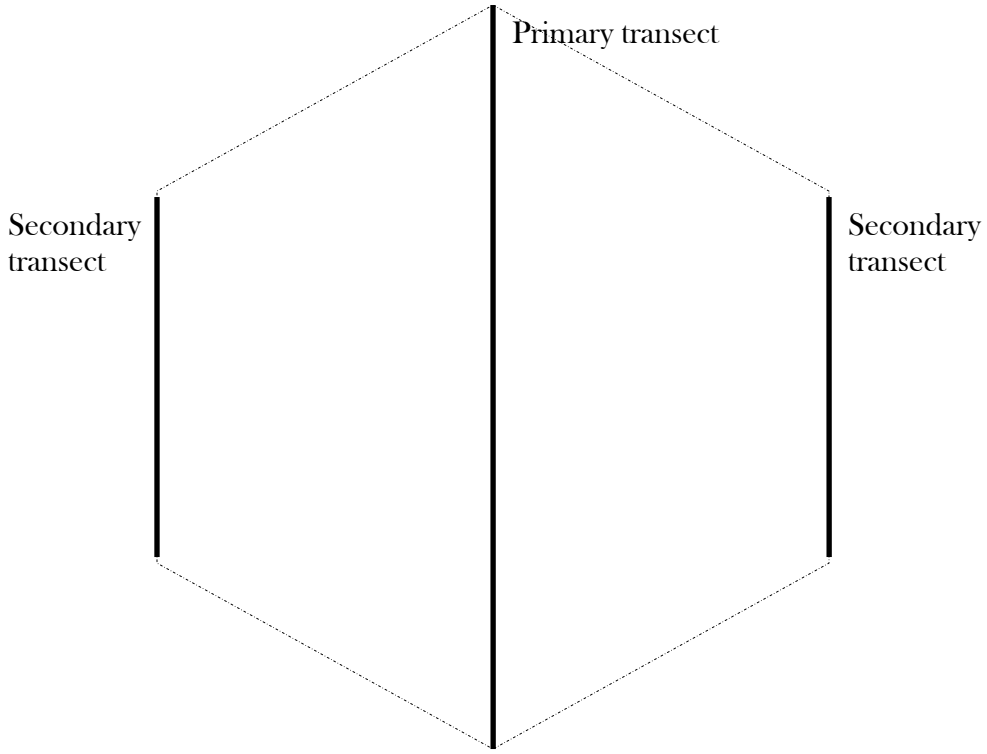
Alternate bird point count data sheet
DATE:_____ OBS:_____ LOCATION:_____POINT #:____
COMMENTS:
Start time:____ St temp:___%Clouds:___Rain:____Windsp:____End time:____ E-temp:___
π=0-3 minutes
ε=3-5 minutes
#=5-10 minutes
Δ = Auditory
*=Visual
FO= Fly-over



Date data entered:___Corresponding record #:_____Date checked:____Checked by:___

Butterfly transect map. Observer:_____ Date:_____Location:_____
Sketch habitats/section breaks/roads, also record whether the canopy is open or closed for each section of the transect:

Remember, each hexagonal side is 200 m in length and the dividing transect is 400 m long.



It may be possible to do this in the lab using the GIS database, however, this data should be groundtruthed on the first butterfly transect data collection. Subsequent data collection will not need to re-confirm this information unless conditions have changed (i.e. the site was burned or logged or plowed, etc.)

Date data entered:___Corresponding record #:_____Date checked:____Checked by:_

Butterfly transect data: DATE:__________ OBS:__________ pg___of___
LOCATION:______________ VISIT #:____ Start time:____ End time:____
Start Temp (C):_____ End Temp (C):_____ %clouds:_____ Rain:___ Wind spd:_____
Disturbance:_________________________Comments:_____________________________

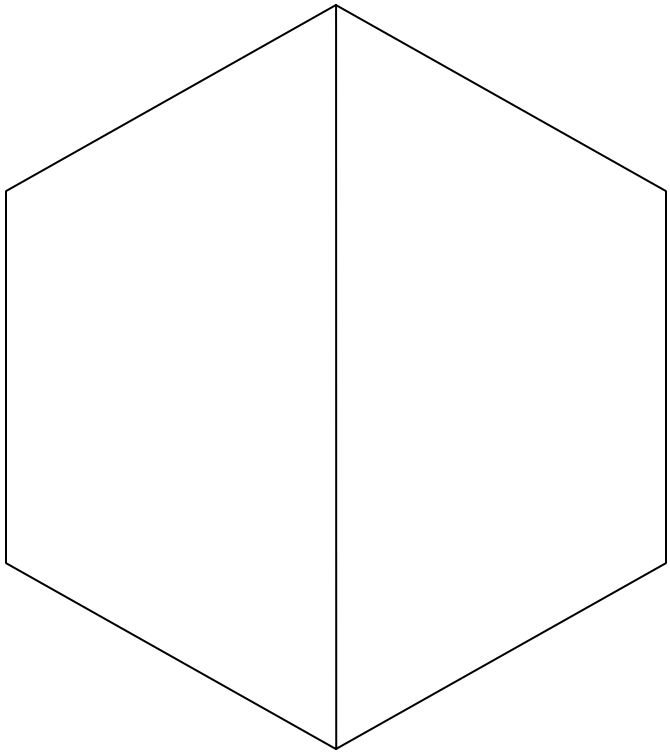
Time				Species				# seen		Trans Sect (1-20)		Act	ID?		Comments

Transect sections: 0-10m=1; 11-20m=2; 21-30m=3; 31-40m=4; 41-50m=5; 51-60m=6; etc.
Act.: Activity: N=nectaring; F=flying; R=resting; O=ovipositing; B=basking; C=courtship.
ID?: Relative certainty of ID: V=voucher; CR=capture & release; GS=good sight; S=sight; PS= poor sight.

Date data entered:___Corresponding record #:________Date checked:____Checked by:_

Damselfly/dragonfly habitat map.
Observer:_____Date:_____Location:_____
Sketch habitats/landmarks/roads:

Remember, each hexagonal side is 200 m in length and the dividing transect is 400 m long.



It may be possible to do this in the lab using the GIS database, however, this data should be groundtruthed on the first dragonfly data collection. Subsequent data collection will not need to re-confirm this information unless conditions have changed (i.e. the site was burned or logged or plowed, etc.)

Other notes:

Dragonfly and damselfly data: DATE:__________ OBS:__________ pg___of___
LOCATION:______________ VISIT #:____ Start time:____ End time:____
Start Temp (C):_____ End Temp (C):_____ %clouds:_____ Rain:___ Wind spd:_____
Disturbance:________________________Comments:____________________________

Species				Habitat area name	Tally	Total count	Comments

Date data entered:___Corresponding record #:________Date checked:____Checked by:_

Terrestrial snail data: DATE:__________ OBS:____________________ pg____of____
LOCATION:____________________ VISIT #:_____ Start time:_____ End time:_____
Air Temp (°C):_____ Soil Temp (°C):_____ %clouds:_____ Rain:_____ Windspd:____
Comments:____

Lo=Location=center point (C) or outer edge (O) of hexagon. Bo #=Board #. Rc=Recaptute=Y or N. Aperture = shell opening (where snail body goes). All measurements are in mm.

Lo	Bo #	Species				Mark color and number				Rc	Shell height		Shell width		Aperture height		Aperture width		Comments

Date data entered:___Corresponding record #:________Date checked:____Checked by:_

Stream Fish Community Data Sheet: DATE:_____ OBS:_____
LOCATION:_____ Water body name:_____
Sampling method: ___Backpack; ____Tow boat; _____Seine; _____Other
Actual shock time:____sec; Volts:____; Amps:____; Waveform: (AC)(DC)(Pulsed DC)
Seine: __Bag; __Straight line; Seine length:_____(ft); Mesh size:____(in): # hauls:____
% clouds:_____; Secchi depth:_____; Flow level:_____
Start time:_____Start temp:_____; End time_____ End temp:_____
Comments:_____
_____

Species	Count (tally) 0-3"	4-6"	7-9"	10-12"	13-15"	16-18"	19-21"	22+"	Anomaly code	# affect.

Anomaly codes: **D**=deformities, **E**=eroded or frayed fins, **L**=lesions or ulcers, **T**=tumors, **M**=multiple DELTS on same fish, **AL**=anchor worm-light, **AH**=anchor worm-heavy, **BL**=black spot-light, **BH**=black spot-heavy, **CL**=leeches-light, **CH**=leeches-heavy, **F**-fungus, **I**=Ich, **N**=blind, **S**=emaciated, **P**=external parasites, **Y**=popeye, **W**=swirled scales, **Z**=wound, other (describe)

Date data entered:___Corresponding record #:_____Date checked:____Checked by:_

Stream Benthic Macroinvertebrate Community survey data sheet. DATE:_____
OBS:_____ Water Body name:_____
LOCATION:_____ START TEMP:_____END TEMP:_____ Rain:_____
GPS Coordinates of downstream starting point:_____ % CLOUDS:____
Turbidity:_____ Overall sampling effectiveness:_____ Flow level:_____

Semi-Quantitative (Modified-Hess / Surber / Artificial Substrate) Sampling:
Sampling gear used:_____
Preservative used:_____

Replicate sample ID #	#1	#2	#3
Unique sample ID #			
Dominant form of periphyton growth*			
Amount of periphyton growth**			
Amount of sedimentation/embeddedness**			
Amount of macroinvertebrate colonization**			
Other comments			

* FA=Filamentous Algae Growth; NF=Non-filamentous Algae Growth.
** LT (light) < 25% of substrate surface effected; MD (moderate) 25-50% effected; MH (moderately heavy) 51-75% effected; & HV (heavy) > 75% effected.

Qualitative, Multi-Habitat Sampling
Sampling gear used:_____
Begin time:_____ End time:_____ Total sampling minutes:_____

Date data entered:___Corresponding record #:_____Date checked:____Checked by:_

Lake or pond Fish Community Data Sheet: DATE:_____OBS:_____
LOCATION:_____ Water body name:_____
Sampling method: ___shock boat; _____fyke net; _____Other
Actual shock time:____sec; Volts:____; Amps:____; Waveform: (AC)(DC)(Pulsed DC)
Fyke net: net length:_____(ft); Mesh size:____(in); % clouds:____; Secchi dp:_____;
Flow level:_____; Start time:_____Start temp:_____; End time_____ End temp:_____
Comments:_____
_____

Species	Count (tally)								Anomaly code	# affect.
	0-3"	4-6"	7-9"	10-12"	13-15"	16-18"	19-21"	22+"		

Anomaly codes: **D**=deformities, **E**=eroded or frayed fins, **L**=lesions or ulcers, **T**=tumors, **M**=multiple DELTS on same fish**, AL**=anchor worm-light, **AH**=anchor worm-heavy, **BL**=black spot-light, **BH**=black spot-heavy, **CL**=leeches-light, **CH**=leeches-heavy, **F**-fungus**, I**=Ich, **N**=blind, **S**=emaciated, **P**=external parasites, **Y**=popeye, **W**=swirled scales, **Z**=wound, other (describe)

Date data entered:___Corresponding record #:_____Date checked:____Checked by:___

Back of Lake or pond Fish Community Data Sheet:
DATE:_____OBS:_____ LOCATION:_____
Fish tags used here:

Species	Tag numbers:

Species	Length (cm)

Species	Length (cm)

Date entered:_____by:_____Rec.#:_____
Checked by:_____Date:_____

Lengths and weights for subsample of fish at LOCATION:_________________

DATE:_______________
OBS:______________________________

Species	Length (cm)

Species	Length (cm)

Date entered:______by:_____Rec.#:_____
Checked by:_______Date:_________

River Fish Community Data Sheet: DATE:_____ OBS:_____
LOCATION:_____ Water body name:_____Run:____
Sampling method: ___Shock boat; _____Trawl line; _____Other
Actual shock time:____sec; Volts:____; Amps:____; Waveform: (AC)(DC)(Pulsed DC)
Trawl: distance sampled:_____(m); Mesh size:____(in): # hauls:____% clouds:_____;
Secchi depth:____; Flow:____Starttime:____Starttemp:____; Endtime____ Endtemp:___
Comments:_____
_____

Species	Count (tally) 0-3"	4-6"	7-9"	10-12"	13-15"	16-18"	19-21"	22+"	Anomaly code	# affect.

Anomaly codes: **D**=deformities, **E**=eroded or frayed fins, **L**=lesions or ulcers, **T**=tumors, **M**=multiple DELTS on same fish**, AL**=anchor worm-light, **AH**=anchor worm-heavy, **BL**=black spot-light, **BH**=black spot-heavy, **CL**=leeches-light, **CH**=leeches-heavy, **F**-fungus**, I**=Ich, **N**=blind, **S**=emaciated, **P**=external parasites, **Y**=popeye, **W**=swirled scales, **Z**=wound, other (describe)

Date data entered:___Corresponding record #:_____Date checked:____Checked by:___

Photo Voucher Cards for Fish Photo IDs

PHOTO FISH VOUCHER Voucher Number:_______________ Date:__________________________ Wetland Name:________________ Specific location:________________ Run:________ Common Name:________________________	PHOTO FISH VOUCHER Voucher Number:_______________ Date:__________________________ Wetland Name:________________ Specific location:________________ Run:________ Common Name:________________________
PHOTO FISH VOUCHER Voucher Number:_______________ Date:__________________________ Wetland Name:________________ Specific location:________________ Run:________ Common Name:_______________________	PHOTO FISH VOUCHER Voucher Number:_______________ Date:__________________________ Wetland Name:________________ Specific location:________________ Run:________ Common Name:________________________
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PHOTO FISH VOUCHER Voucher Number:_______________ Date:__________________________ Wetland Name:________________ Specific location:________________ Run:________ Common Name:________________________	PHOTO FISH VOUCHER Voucher Number:_______________ Date:__________________________ Wetland Name:________________ Specific location:________________ Run:________ Common Name:________________________

Mussel survey data sheet. DATE:_______ OBS:________ LOCATION:_______________
WATER BODY NAME:_________________ START TEMP:______END TEMP:________
UTMS of downstream starting point: N__________________E_________________________
Rain:______ % CLOUDS:______ STREAM SECTION (1 or 2):_________________
Always have at least 2 data sheets (1/stream section) Quad#__:StartTime:____Endtime:____
Q#__:ST:____ET:____ Q#__:ST:____ET:____ Q#__:ST:___ET:___ Q#__ ST:____ET:____
Q#__:ST:____ET:____ Q#__:ST:____ET:____ Q#__:ST:___ET:___ Q#__:ST:____ET:___
Q#__:ST:____ET:____ Q#__:ST:____ET:____ Quad=quadrat #; length in mm; S=Sex

Quad			Species						Length			S

Quad			Species						Length			S

Date entered:______by:______
Record#:______Checked:_______by:____

Suggested labels for unknown and collected plants:

Species ID in field:______________________ Hexagon plot ID:_______________________ Subplot ID:_____________________________ Quadrat ID:____________________________ Percent cover:__________________________ Associated species?:_____________________ Collected by:_________ Date:____________ Photo #:___________ Comments:_________ ______________________________________	Species ID in field:______________________ Hexagon plot ID:_______________________ Subplot ID:_____________________________ Quadrat ID:____________________________ Percent cover:__________________________ Associated species?:_____________________ Collected by:_________ Date:____________ Photo #:___________ Comments:_________ ______________________________________
Species ID in field:______________________ Hexagon plot ID:_______________________ Subplot ID:_____________________________ Quadrat ID:____________________________ Percent cover:__________________________ Associated species?:_____________________ Collected by:_________ Date:____________ Photo #:___________ Comments:_________ ______________________________________	Species ID in field:______________________ Hexagon plot ID:_______________________ Subplot ID:_____________________________ Quadrat ID:____________________________ Percent cover:__________________________ Associated species?:_____________________ Collected by:_________ Date:____________ Photo #:___________ Comments:_________ ______________________________________
Species ID in field:______________________ Hexagon plot ID:_______________________ Subplot ID:_____________________________ Quadrat ID:____________________________ Percent cover:__________________________ Associated species?:_____________________ Collected by:_________ Date:____________ Photo #:___________ Comments:_________ ______________________________________	Species ID in field:______________________ Hexagon plot ID:_______________________ Subplot ID:_____________________________ Quadrat ID:____________________________ Percent cover:__________________________ Associated species?:_____________________ Collected by:_________ Date:____________ Photo #:___________ Comments:_________ ______________________________________

SUBPLOT (radius = 17.6 m) DATA SHEETS:
DATE:_____OBS:_____PG:___of____ LOCATION:_____
SUBPLOT LOCATION:_____Transect azimuth:_____

Ground cover % (1 m^2 area):

Type	5 m	10 m	15 m
Litter			
Vegetation			
Rock			
Soil / sand			
Water			
Other (explain)			

Vertical vegetation:

At 1 m from center:

Species	Height

At 6 m from center:

Species	Height

At 11 m from center:

Species	Height

At 16 m from center:

Species	Height

Trees species > 28 cm (or 11") dbh & snags > 12.5 cm (or 5"):

Species	DBH	Height	Decay?

Woody debris along all 17.6 m:

Distance from plot center	Small end diameter	Large end diameter	Length	Decay class

Notes on wildlife encountered today:

Date entered:_____by:_____Record#:____
Date checked:_____by:_____

INTERIOR SUBPLOT (radius = 7.3 m) DATA SHEETS:
DATE:_____OBS:_____PG:___of____ LOCATION:_____
SUBPLOT LOCATION:_____

Tree species & snags list (> 12.5 cm or 5")

Species	DBH	Height	Decay?

5 minute area search for plant species:

Plant species

Ground cover%(1 m^2 area near center of plot):

Type	Percent cover
Litter	
Vegetation	
Rock	
Soil/Sand	
Water	
Other (explain)	

Canopy cover at 7.3 m from center of plot:

Direction	Cover (Y/N)
0^0	
90^0	
180^0	
270^0	

Litter depth: azimuth direction:_____

Distance along transect	Depth (cm)
2.5 m	
5.0 m	
7.5 m	

Notes on wildlife encountered today:

Date entered:_____by:_____Record#:____
Date checked:_____by:_____

PLANT COMPOSITION SUBPLOT (radius = 7.3 m) QUADRAT (1 m^2) DATA SHEETS:
DATE:_____OBS:_____PG:___of____ LOCATION:_____
SUBPLOT LOCATION:_____ **Quadrats are 4.6 m (15 ft) from plot center.**

Quadrat 1 (@ 30°):

Plant species	Percent cover

Quadrat 3 (@ 270°):

Plant species	Percent cover

Quadrat 2 (@ 150°):

Plant species	Percent cover

Trampling codes: 1=0-10% of quadrat trampled; 2=11-50% of quadrat trampled; 3=51-100% of quadrat trampled.

Quadrat	Trampling
1	
2	
3	

Date entered:_____by:_____Record#:____
Date checked:_____by:_____

AQUATIC MEASUREMENTS OF LOTIC (running water) HABITAT SAMPLING PLOTS.

DATE:_____OBS:_____LOCATION:_____PG:___of___

Plot	1	2	3	4	5	6	7	8	9	10	11
Distance	0										
Channel type											
Wetted width											
Bankfull width											
Bankfull height											
Incised height											
Stream discharge											
Water temperature											
Water pH											
Water conductivity											
Riparian veg. width											
0 m from shore 0.25mx0.25m plots											
Depth											
% silt											
%sand											
% gravel											
% cobbles											
% boulders											
% bedrock											
% emergent veg.											
% submergt veg.											
_____ m from shore											
Depth											
% silt											
%sand											
% gravel											
% cobbles											
% boulders											
% bedrock											
% emergent veg.											
% submergt.veg.											
_____ m from shore											
Depth											
% silt											
% sand											
% gravel											
% cobbles											
% boulders											
% bedrock											
% emergent veg.											
% submergt. veg											
_____ m from shore											
Depth											
% silt											
% sand											
% gravel											
% cobbles											
% boulders											
% bedrock											
% emergent veg.											
% submergt veg											

Approximate starting pt (GPS coordinates from GIS): E_____ N_____

Actual downstream starting pt (acquired in field): E_____ N_____

Plot	1	2	3	4	5	6	7	8	9	10	11
Water depth											
Location 1											
Location 2											
Location 3											
Location 4											
Location 5											
Location 6											
Location 7											
Location 8											
Location 9											
Location 10											
Spacing between measures:											

Spacing b/t measures – divide wetted width by 10.

Backside of data sheet for:
AQUATIC MEASUREMENTS OF LOTIC HABITAT SAMPLING PLOTS.

Channel type (record for each plot): R=Riffle, P=pool, RU=run, G=glide
Wetted width: Width of water.
Bankfull width: The width of the channel from one side to the other, including the crest or almost crest area, beyond which the water would flow out onto the floodplain.
Bankfull height: How deep the water would get before flooding, so measure the height of the lower of the 2 banks.
Incised height: The depth of the incision of the channel. This is the distance to the first terrace. It will be equal to or greater than the bankfull height.
Stream discharge: The volume of water passing a point during a given time (m^3/sec).
Water temperature
Water pH: The amount of acidity in the water.
Conductivity: The amount of ions (e.g. salts) dissolved in the water.
Riparian vegetation width is the width of the vegetation within the floodplain

At 4 locations into the channel from the shore edge, record the water depth at that point and determine the amount of that part of the plot (0.25*0.25m) in each of the following categories:
Bedrock
Boulders (> 300 mm)
Cobble (75-300 mm in size)
Gravel (2-75 mm)
Sand
Silt (mud or clay, organic muck or peat)
Emergent vegetation
Submergent vegetation
Percent coverage in these 8 boxes should add to 100.

If it is possible to cross the channel, water depth should be measured at 10 equally spaced locations.

Date entered:_____by:_____Record#:_____Date checked:_____by:_____

AQUATIC MEASUREMENTS OF LOTIC (running water) HABITAT SAMPLING PLOTS.
DATE:_____OBS:_____LOCATION:_____PG:___of___

POOLS data:

Number	Maximum depth	Surface area	Cause

Number: May be obtained from GIS cover or in the field. Either check with numbered map or mark number and location on map in field for addition to the GIS database.
Cause: Why is the water pooling? Examples include log, rocks, soil, dam.

Additional notes on wildlife encountered today:

Woody debris:

Distance from downstream starting pt.	Small end diameter	Large end diameter	Length	Decay class

Date entered:_____by:_____Record#:_____
Date checked:_____by:_____

AQUATIC MEASUREMENTS OF LENTIC (standing water) HABITAT SAMPLING PLOTS.
DATE:_____OBS:_____LOCATION:_____PG:___of___
UTM coordinates (GPS acquired in field): E_____ N_____

Plot	Distance	Max. Depth	In edge depth	% silt	% sand	% gravel	% cobble	% boulders	% bedrock	% emerg. Veg.	% submer veg
1	0										
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
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29											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

Distance can be filled out in the lab based on GIS coverage and used to find sampling plot.
In edge depth=depth at the edge of the plot furthest into the water from shore.
% classifications: Bedrock
Boulders (> 300 mm)
Cobble (75-300 mm in size)
Gravel (2-75 mm)
Sand
Silt (mud or clay, organic muck or peat)
Emergent vegetation
Submergent vegetation
Percent coverage in these 8 boxes should add to 100

Date entered:_____by:_____
Record#:_____
Date checked:_____by:_____

Report Review Form
Review Coordinator's Form

Iowa Multiple Species Inventory and Monitoring Program

Title of Report to be reviewed:_____
Date of review request:_____

Scientific Reviewer Name:_____ Date of review return:_____

Scientific Reviewer Name:_____ Date of review return:_____

Scientific Reviewer Name:_____ Date of review return:_____

Scientific Reviewer Name:_____ Date of review return:_____

Scientific Reviewer Name:_____ Date of review return:_____

Non-scientific Reviewer Name:_____ Date of review return:_____

Non-scientific Reviewer Name:_____ Date of review return:_____

Non-scientific Reviewer Name:_____ Date of review return:_____

Peer review of the above named document has been completed. Reviewers comments have been sent to the program scientist(s). Program scientist(s)' responses to the comments have been documented. The final document has been received. Assurance is given that the document and review have met the Periodic Review and Evaluation guidelines outlined in the MSIM manual. A record of the review comments and revision strategy is on file.

Name & Title of Peer Review Coordinator: _____

_____

_____ _____

Signature of Peer Review Coordinator Date

Instructions to Scientific Peer Reviewers
Reviewer Comments Form

To make the review process as easy as possible, the following questions are the primary ones to consider. Should the answer to a question be "no", please provide narrative comments in either the space provided or on additional paper. Address additional issues at the end of this form or on additional paper.

1. Are the objectives clearly defined and reachable?

2. Is the sampling and experimental design appropriate?

    a. Will it meet the program objectives?

    b. Is it statistically valid?

3. Are the field techniques clearly described and sufficient to meet program objectives?

4. Are analytical and statistical procedures clearly described and appropriate?

5. Does the timeline and budget ensure that objectives will be met?

6. Are reports and other products identified and adequate?

7. Is the combination of scientific disciplines proposed sufficient to adequately meet the objectives?

8. Additional issues:

*Reviewer Name & Title:_____

_____ _____

Signature or Reviewer Date

*If you wish to remain anonymous to the program staff, please make sure that the review coordinator understands this and do not sign this paper.

Instructions to Non-scientific Peer Reviewers
Reviewer Comments Form

To make the review process as easy as possible, the following questions are the primary ones to consider. Should the answer to a question be "no", please provide narrative comments in either the space provided or on additional paper. Address additional issues at the end of this form or on additional paper.

1. Is the report understandable and easy to read?

2. Does the report adequately describe the objectives, sites, how the data was collected and analyzed?

3. Are the conclusions logical?

4. Additional issues:

*Reviewer Name & Title:_____

_____ _____

Signature or Reviewer Date

*If you wish to remain anonymous to the program staff, please make sure that the review coordinator understands this and do not sign this paper.